

Amendments to the Claims

Listing of Claims:

1. (currently amended) A method of packet detection, wherein a receiver receives
5 an input signal, the input signal comprising a packet, and the packet comprising a preamble which comprises a plurality of pseudo-noise (PN) codes, the method comprising:
obtaining a correlation of the input signal;
detecting a peak power of the input signal; [[and]]
10 obtaining an average power of the preamble; and
determining if the packet is detected according to the correlation and the peak power
of the input signal, wherein the packet is detected when the ratio of the
correlation to the average power of the preamble is larger than a
predetermined value and when the ratio of the peak power to an average
15 power of the noise is large than another predetermined value.
2. (original) The packet detection method in claim 1 further comprising filtering the input signal.
- 20 3. (original) The packet detection method in claim 1 further comprising determining the periodicity of peaks in the preamble.
4. (original) The packet detection method in claim 3 wherein determining the periodicity of the preamble comprises performing a convolution for a conjugate of
25 a PN code and the PN codes to generate a processed preamble.
5. (previously presented) The packet detection method in claim 4 wherein to

obtain a correlation of the input signal comprises obtaining a correlation of the processed preamble.

6. (original) The packet detection method in claim 4 wherein detecting a peak power
5 of the input signal comprises detecting a peak power of the processed preamble.

7-8. (canceled)

9. (currently amended) The packet detection method in claim 1 further comprising
10 obtaining ~~[[an]]~~ the average power of noise of the preamble.

10-11. (canceled)

12. (currently amended) A packet detecting device comprising:
15 a receiving unit for receiving an input signal, the input signal comprising a packet,
the packet comprising a preamble;
a convolution operating unit connected to the receiving unit for performing a
convolution of the input signal;
a correlation calculating module connected to the convolution operating unit for
20 obtaining a correlation of the input signal;
a peak power detecting module connected to the convolution operating unit for
detecting a peak power of the input signal, the peak power detecting
module comprising:
a power calculating unit for obtaining average power of noise of the
25 preamble; and
a multiplication unit for multiplying the average power of the noise by a
predetermined value to generate a multiplication signal;
a determining module connected to the correlation calculating module and the peak

power detecting module comprising:
a comparison unit for comparing the multiplication signal of the peak
power detecting module with the peak power; and
a determining unit which determines if the packet is detected according to
the peak power and the correlation.

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13. (original) The packet detecting device in claim 12 wherein the correlation
calculating module comprises a power calculating unit for obtaining average power
of the preamble.

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14. (original) The packet detecting device in claim 13 wherein the correlation
calculating module further comprises a division unit for dividing the correlation of
the preamble by the average power of the preamble and outputting a division signal
to the determining module.

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15. (original) The packet detecting device in claim 13 wherein the correlation
calculating module further comprises a multiplication unit for multiplying the
average power of the preamble by a predetermined value and outputting a
multiplication signal to the determining module.

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16. (canceled)

17. (currently amended) The packet detecting device in claim ~~[[16]]~~ 12 wherein the
peak power detecting module further comprises a division unit for dividing the peak
power of the preamble by average power of the noise and outputting a division
signal to the determining module.

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18-22. (canceled)

23. (original) The packet detecting device in claim 17 wherein the determining module comprises a comparison unit for comparing the division signal of the peak power detecting module with a predetermined value.

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24. (original) The packet detecting device in claim 14 wherein the determining module further comprises a comparison unit for comparing the division signal of the correlation calculating module with a predetermined value.

10 25. (original) The packet detecting device in claim 15 wherein the determining module further comprises a comparison unit for comparing the multiplication signal of the correlation calculating module with the correlation of the preamble.

26-28. (canceled)

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29. (currently amended) The packet detecting device in claim ~~[[27]]~~ 23 wherein the determining module further comprises a determining unit for determining if the packet arrives according to comparison results of the comparison unit.

20 30. (currently amended) The packet detecting device in claim ~~[[28]]~~ 12 wherein the determining module further comprises a determining unit for determining if the packet arrives according to comparison results of the comparison unit.

25 31. (new) A method of packet detection, wherein a receiver receives an input signal, the input signal comprising a packet, and the packet comprising a preamble which comprises a plurality of pseudo-noise (PN) codes, the method comprising:
obtaining a correlation of the input signal;
detecting a peak power of the input signal;

obtaining an average power of noise of the preamble; and
determining if the packet is detected according to the correlation and the peak power
of the input signal, wherein the packet is detected when the ratio of the
correlation to an average power of the preamble is larger than a
5 predetermined value and when the ratio of the peak power to the average
power of the noise is large than another predetermined value.